THE ADVISORY BOARD ON RADIATION AND WORKER HEALTH
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
CENTERS FOR DISEASE CONTROL AND PREVENTION

Summary Minutes of the Fortieth Meeting
September 19-21, 2006

The Fortieth Meeting of the Advisory Board on Radiation and Worker Health (ABRWH or the Board) was held at the Westin Casuarina Hotel in Las Vegas, Nevada on September 19-21, 2006. The meeting was called to order by **Dr. Paul Ziemer**, Chairman of the Board, and by **Dr. Lewis Wade**, the Designated Federal Official, Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH). These summary minutes, as well as a verbatim transcript certified by a court reporter, are available on the internet on the NIOSH/Office of Compensation Analysis and Support (OCAS) web site located at www.cdc.gov/niosh/ocas.

Those present included the following:

Board Members:

Dr. Paul Ziemer, Chair; Mr. Bradley Clawson; Mr. Michael Gibson; Mr. Mark Griffon; Dr. James Lockey; Dr. James Melius; Ms. Wanda Munn; Dr. John Poston; Mr. Robert Presley; and Dr. Genevieve Roessler.

Designated Federal Official: Dr. Lewis Wade, Executive Secretary.

Federal Agency Attendees:

Department of Health and Human Services:

Mr. Jason Broehm, Mr. Larry Elliott, Mr. Stuart Hinnefeld, Ms. Liz Homoki-Titus, Ms. Emily Howell, Mr. Mark Rolfes, Mr. LaVon Rutherford, Mr. David Staudt, Dr. Brant Ulsh.

Department of Labor: Mr. Jeff Kotsch.

Contractors:

Mr. Mel Chew, Ms. Kate Kimpan, representing Oak Ridge Associated Universities.

Dr. Hans Behling, Ms. Kathy Behling, Mr. Joe Fitzgerald, Dr. Arjun Makhijani and Dr. John Mauro, representing Sanford Cohen & Associates.

Congressional Staff Personnel:

Ms. Cindy Blackston (House Judiciary Committee staff), Ms. Carolyn Boller (Colorado Congressman Mark Udall), Ms. Mira Horowitz (Massachusetts Senator John Kerry), Ms. Michele Jacquez-Ortiz (New Mexico Congressman Tom Udall), Mr. William Powers (Massachusetts Congressman Richard Neal), Ms. Kathleen Rozner and Ms. Sandra Schubert (Nevada Senator Harry Reid), Ms. Portia Wu (Massachusetts Senator Edward Kennedy).

Members of Congress:

Senator Harry Reid, Nevada

Petitioners:

Ms. Susan Atkinson, Mr. George Eldridge, Mr. Andrew Evaskovich, Mr. Richard Miller, Ms. Mary Realle, Ms. Harriet Ruiz, Mr. Aaron Wilson.

Public Attendees: See Registration.

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Dr. Ziemer called the meeting to order at 1:15 p.m., welcoming the public and requesting sign-ups for those wishing to make comment to the Board. He encouraged all those present to register their attendance and to avail themselves of documents to be used in the Board's deliberations.

Dr. Wade thanked Board members for their service and clarified that contrary to his announcement during the last Board phone conference, **Ms. Wanda Munn** continues in her post as a member of the Board. **Dr. Wade** brought regards from the Secretary of the Department of Health and Human Services (HHS); the Director of the Centers for Disease Control (CDC); and the Director of NIOSH. He welcomed all attendees.

Dr. Ziemer noted and recognized the presence of **Ms. Michele Jacquez-Ortiz** from the office of **Congressman Tom Udall** of New Mexico.

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CHARTER FOR SUBCOMMITTEE

Dr. Ziemer explained that currently the Board has only one chartered subcommittee, the Subcommittee on Dose Reconstruction and Site Profile Reviews. If action taken at the Board's most recent phone meeting were to be finalized, that entity would become strictly a Subcommittee on

Dose Reconstruction Reviews. Site profile reviews would no longer be part of that subcommittee's responsibility. When the subcommittee met earlier in the day, it approved a charter revision which would both accomplish that change and specify a smaller subgroup of the full Board as the membership of the subcommittee. That revision comes now to the Board as a recommendation from the subcommittee.

The charter revision is fully detailed in the document entitled "Draft Revision 1, September 19, 2006, ABRWH, Establishment of a Committee." If the Board were to approve this proposed charter language, it would go as a recommendation to the Secretary of HHS for his final action. Changes in the document resulting from the morning's subcommittee meeting included minor corrections and an updated Membership Roster as follows: **Mr. Mark Griffon**, Chairman; **Mr. Michael Gibson**, **Dr. John Poston**, **Ms. Wanda Munn** as members; **Mr. Robert Presley**, Alternate member 1; **Mr. Bradley Clawson**, Alternate member 2; and **Dr. Lewis Wade** as the Designated Federal Official (DFO). It was clarified that part of the motion would include terminating the original charter in order to institute the revised charter.

The subcommittee's recommendation of the charter revision constituted a motion to approve the document.

The motion was open for discussion.

Following minor wordsmithing, the motion carried, with one abstention by Mr. Gibson as a result of his inability to hear much of the discussion due to poor sound quality of the telephone transmission.

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A motion was made and seconded to recommend that the previous charter for the Subcommittee on Dose Reconstruction and Site Profile Reviews be terminated.

The motion passed unanimously and without discussion.

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Acknowledging that most of the site profile work takes place in workgroups, **Dr. Ziemer** asked **Dr. Wade** to review the workgroup assignments, suggesting the Board could then formally restore memberships. **Dr. Wade** listed memberships in the Board's current working groups and clarified that on the August 8th Board phone call, the only changes in that roster entailed removing **Ms. Munn** from two workgroups, which vacancies had not been replaced. They included her

positions on the site profile workgroups for Nevada Test Site (NTS) and the Rocky Flats Special Exposure Cohort (SEC) and site profile review.

A motion was made and seconded to restore Ms. Wanda Munn's position on the named workgroups.

The motion passed unanimously.

Dr. Wade noted that **Ms. Munn** had participated on all of the working group calls between August 8th and the present and was fully up to date on their deliberations.

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PROGRAM STATUS REPORT - NIOSH

Mr. Larry Elliott, NIOSH
Director, Office of Compensation and Analysis Support

Mr. Elliott brought regards from **Dr. Jim Neton**, who was unable to attend the meeting. **Dr. Neton**'s return to the OCAS team is anticipated within four to six weeks. **Mr. Elliott**'s presentation would include an update on the dose reconstruction program, NIOSH's accomplishments, and a status report on issues.

Mr. Elliott provided statistics on the number of claims referred by DOL to NIOSH for dose reconstruction and the numbers returned to DOL for adjudication. He discussed claims pulled by DOL for various reasons, claims under specific SEC class eligibility and administratively closed cases. Approximately 5,500 cases await dose reconstruction, roughly 25 percent of those forwarded to NIOSH by DOL. Approximately 27 percent of the completed cases returned to DOL have been found to be compensable.

Mr. Elliott reviewed the three dose reconstruction categories of best estimate, overestimate and underestimate. Of the 5,500 cases awaiting dose reconstruction, 1,230 have been assigned to a dose reconstructor. At present 622 draft DRs await the return of a signed OCAS-1 form which indicates the DR includes all information currently available to the claimant.

Mr. Elliott discussed the next six-month period, during which time NIOSH expects to arrive at a steady state, holding no claims for dose reconstruction that are over a year old. He described the completion rate by ORAU and how it will relieve the backlog, the efforts to finalize the first 5,000 cases, and the status of cases pended. **Mr.**

Elliott announced he planned to provide statistics on SEC impact at a future Board meeting.

Mr. Elliott elaborated on administratively closed cases, reworks, and cases awaiting DOE records. He described how NIOSH monitors trends in DOE response and provides regular follow-up on unanswered information requests.

Addressing the SEC petitions, **Mr. Elliott** listed the ten classes of workers added as of September 11, 2006. Six have been evaluated by NIOSH and provided to the Board for review, four of which are on the agenda for this meeting. Six evaluation reports are in development. Thirteen requests are currently in the qualification process. Twenty-four have been administratively closed, and **Mr. Elliott** described each of those processes in some detail. He also discussed the numbers of claims at DOL currently for class member eligibility determination.

Updating the reference documents used in the DR program to address claims is an ongoing process. Currently NIOSH has 140 Technical Basis Documents and 59 Technical Information Bulletins in use, with a number under revision.

Mr. Elliott discussed one of those documents, TIB-52, and how it was developed to address concerns expressed relative to the ability to reconstruct doses for construction trades workers. TIB-52 will be presented later in the meeting, and NIOSH is interested in comments on it.

Program Evaluation Reviews were described by **Mr. Elliott** as a means by which completed non-compensable cases are evaluated to see if reference document modification or development would affect the decision outcome. The five that have been completed were named, with another three underway as a result of modifications in either the DR process or the POC rule.

Addressing NIOSH's communications initiatives, **Mr. Elliott** indicated they have revised the notice to claimants about receiving their claim from DOL. The acknowledgment packet and its materials will be going out to claimants in January. The packet is currently in final technical and legal review with the Office of General Counsel.

A second round of internal technical and peer review is underway on the revised draft DR report which explains to claimants how NIOSH did its work and the outcome of that work for a particular claimant. **Mr. Elliott** indicated NIOSH hopes to send the document to the Board in October for review and comment. NIOSH will seek the Board's assistance

in providing clear communication within that proposed DR report language.

The DR video is in final review, with external peer review completed. Final edits are being made and the video will be made available on the NIOSH web site, at DOL District Offices, and to anyone who requests it.

Discussion Points:

- The Program Evaluation Reports (PERs) will be shared with the Board.
- Which agency originates PERs and who reads them.
- The distinction between PERs and reworks.
- The triggering of PERs through reviews of TBDs or site profiles.
- A status request regarding new COI concerns on site profiles; such report and update is to be scheduled for the October Board teleconference.
- How NIOSH can be sure data was properly reported in light of DOE's admitted inadequate monitoring of employees.
- A revisit of the repeated request for information on how many site profiles were generated by hourly or salaried workers in the field who were not members of management or the radiation safety programs.
- That request should be submitted in writing.

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PROGRAM STATUS REPORT – DEPARTMENT OF LABOR

Mr. Jeff Kotsch,
Department of Labor

Mr. Kotsch explained that despite attempts to coordinate the tracking mechanisms inherent in NIOSH's and DOL's individual systems, the numbers reported by the agencies in today's presentations would not match.

Mr. Kotsch offered an overview of DOL activity relating to cases in EEOICPA, Part B. These cases concern primarily cancers, but include silicosis claims, chronic beryllium and beryllium sensitivity. To date, DOL has had 53,583 cases involving 76,540 claims. Claims always outnumber cases because cases can give rise to multiple claims, depending on the number of survivor claimants. Of 34,346 cancer cases, DOL has referred 22,260 cases to NIOSH.

Mr. Kotsch described Part E, its origins and evolutions, and provided some updates on its progress.

As of September 11, DOL has provided $2.1 billion in total compensation, with $1.7 billion of that from Part B and $456 million under the Part E program. Medical benefits provided to living employees totaled $122 million. Total payees under EEOICPA number about 24,500; the bulk of those, 20,800 payees, are under Part B; Part E payees number 3,700.

Mr. Kotsch described how cases come into the program via four District Offices around the country. Claims examiners conduct an initial development procedure to make determinations of medical evidence to support the claim, employment at a covered facility (DOE or AWE), and availability of appropriate information in survivor claims. DOL then sends the claims to NIOSH for dose reconstructions.

There are currently some 6,300 cases at NIOSH for dose reconstruction. At the next level there are 2,436 cases with recommended decisions from the District Office but no final decisions. Those dose-reconstructed cases have District Office recommended decisions and are in the hands of claimants, who then have an opportunity to appeal the process if it's a denied case or ask for a hearing to present additional information. **Mr. Kotsch** detailed the variables within that appeals process. Appealed cases which now have a final decision from the Final Adjudication Branch total approximately 22,800; 8,297 acceptances and 14,503 denials.

The biggest component of denials consists of dose-reconstructed POCs of less than 50 percent. Other denial categories include lack of employment verification at a covered facility, insufficient medical evidence to support the claim, ineligible survivor; or a non-covered condition under Part E, which may be addressed under Part E.

Under the new SEC related cases, DOL has withdrawn 884 cases for SEC reviews, primarily the first six newly-added classes. Of those, 690 have final decisions, with 592 approvals. **Mr. Kotsch** was unsure of the basis for the denials. Cases with recommended decisions but no final decision total 171, and 23 have been received by the District Office and are pending the writing of the recommended decision.

Mr. Kotsch noted the bulk of reworks come from cases which have evidence of additional cancers, additional employment or additional survivors, factors which could ultimately affect the dose reconstruction.

Mr. Kotsch provided a breakdown on the status of cases for three of the facilities with SEC petitions to be discussed at this Board meeting, namely, the Oak Ridge Institute for Nuclear Studies (ORINS), Los Alamos National Laboratory (LANL), and the S-50 Oak Ridge Thermal Diffusion Plant. His final slide detailed the status of cases at Pacific Proving Ground (PPG) and Nevada Test Site (NTS). Total compensation figures for each site, respectively, are: $1.4 million, $24 million, $700,000, $2.6 million, and $38 million.

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Discussion Points:

- Scientific or technical reasons for DOL's request for NIOSH to do reworks.
- Board concern over defining the classes within the SEC and a renewed request for employment classification information.
- Regarding Subpart E determinations, how DOL deals with DOE records that were based on admittedly improper monitoring.
- Whether DOL's assumptions are claimant-favorable and how their determinations are made in cases of absent or questionable exposure information.

DOL will address reworks, definitions and assumptions in detail at the next Board meeting.

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SCIENCE ISSUES

Dr. Brant Ulsh, NIOSH

Dr. Ulsh covered three primary topics for his presentation, including general coworker methodology and how NIOSH applies it, the construction trade worker (CTW) TIB, and an update on oro-nasal breathing and ingestion.

Instances in which coworker data might be applied include situations where workers are either unmonitored or where monitoring is incomplete. If NIOSH's overestimating and underestimating approaches are not appropriate, coworker data might be used, provided that suitable coworker data for the site is available. The overestimating approaches would be considered not appropriate if their use resulted in a POC above 50 percent.

Just prior to this meeting, NIOSH finalized TIB-52 to provide methodologies for performing DRs for the subset of unmonitored the

construction trade workers. Dr. Ulsh's slide listed a dozen job titles characterizing CTWs. He described by whom and when such workers would have been employed. He detailed several data sources which enabled NIOSH to develop this coworker TIB.

Regarding external data, or radiation sources outside the body, NIOSH looked at the data for the subset of workers known as CTWs and the data for all monitored workers (AMWs). The AMW category includes CTWs and others. NIOSH then took the ratio of the CTWs and compared those to the AMWs at the 95th percentile because that was the most relevant metric for this TIB and it ensured claimant-favorability to the CTWs.

Addressing internal dose data, **Dr. Ulsh** noted CTWs and AMWs were similar in almost all cases, except at Hanford site, where CTWs were seldom included in the routine bioassay program. More frequently, CTWs received bioassays in special situations where an intake was suspected. That led NIOSH to conclude the CTW data at Hanford site would be biased high. To ensure favorability to the CTWs, the coworker data at Hanford will be multiplied by a factor of two. For sites other than Hanford, AMW data for internal dose will apply to the construction trade workers.
In summary, OTIB-52 will guide dose reconstructors to apply an adjustment factor of 1.4 for CTWs for the external data, and the 95th percentile will be applied to site-specific coworker data unless there is a compelling reason otherwise. NIOSH will apply the AMW internal data to the construction trade workers at all sites except Hanford. For Hanford CTW cases, NIOSH will double the results of the internal coworker data. NIOSH will now begin to process cases using TIB-52 for approximately 906 CTWs awaiting dose reconstruction.

Dr. Ulsh could offer only a status report on oro-nasal breathing and ingestion, because results of NIOSH's ongoing investigations were not yet available. NIOSH is interested in the impact of oro-nasal breathing on internal DR to avoid underestimation of anyone's internal dose.

Ingestion surfaced as an issue during the Bethlehem Steel site profile review. NIOSH recognizes the need to develop a cross-cutting approach to this issue. NIOSH is working with contractors at EG&G to conduct a comprehensive literature review, with completion anticipated by the middle of October. Technical reports on both the oro-nasal breathing and ingestion issues will follow, hopefully by the end of 2006.

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Discussion Points:

- Whether NIOSH will attempt to separate the ingestion and inhalation issues.
- Whether ICRP-66 includes consideration of non-standard breathing.
- Whether NIOSH anticipates any change in the particle size considerations, given that the ICRP model changed from one to five microns.
- NIOSH's proposed adjustment factors demonstrate their commitment to make the doses fair and reasonable for the CTWs.
- How the NIOSH model will account for the swallowing mechanism.
- Whether NIOSH will apply the 1.4 factor for 1960 and later years.
- How NIOSH would account for the anomaly of applying the 1.4 factor to post-1960 CTWs in cases where an AMW actually received higher dose.
- Whether problems existed at the sites not used as a basis for TIB-52.
- Whether NIOSH attempted to compare job duties performed by monitored versus unmonitored workers.
- Whether NIOSH made an assumption that monitored and unmonitored workers fell into the same general type of work category.
- Whether NIOSH has done anything to verify the assumption that monitored workers were selected for monitoring based on exposure potential.
- Whether NIOSH's sample from the monitoring data is truly representative within such a large number of unmonitored workers.
- Whether applying a single adjustment factor is the appropriate approach.
- Whether an adjustment factor should instead be based on something other than a single value for everyone.
- A request for NIOSH to provide more detail on how rigorous its approach to validation.
- A clarification on how the coworker model is applied.
- Whether the construction workers fall into the 250-day period consideration.
- A request for information on what percentage of the CTWs and the AMWs were actually monitored compared to the total populations of these workers on a site in any particular year.
- OTIB-52 is now on the web site and a reading of it could generate further valuable questions.

A carryover concern from the Board's teleconference is a response to Mr. Peter Stafford's letter to the Board which raised a number of issues relative to construction workers. It was noted TIB-52 is a first step towards responding to those issues.

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SC&A ACTIVITIES AND FUNDING

Dr. Lewis Wade, DFO
Mr. David Staudt, CDC
Contracting Officer

Mr. Staudt provided an update on funding for the Board's contractor, Sanford Cohen & Associates (SC&A), for next year; SC&A's readiness for specific work assignments; and a look at conflict of interest (COI) issues and resolutions relative to SC&A. He informed the Board that all the task order modifications requested in August are in place and SC&A is fully authorized to proceed as needed through October 1st, 2007. He detailed the modifications for the Board.

Dr. Wade set the stage for Board approvals and instructions for SC&A. Addressing each of the Task Orders in turn, he asked what additional information, if any, the Board would like to receive in preparation for discussing their choices. Various information was requested, some of which would come from NIOSH, some from SC&A.

Dr. John Mauro, speaking for SC&A, provided the Board with the times by which they would need a Board decision on particular tasks.

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SC&A'S CONFLICT OF INTEREST – RESOLUTION PLAN

Mr. David Staudt, CDC

As background, **Mr. Staudt** noted that SC&A has a Board-approved conflict of interest (COI) plan which is part of their contract. In part the plan provides that SC&A not bid on certain work, but no mention is made of work related to the Department of Defense (DoD). In late May, **Dr. Wade** contacted **Mr. Staudt** with concerns about work SC&A was performing under subcontracts with DoD's Defense Threat Reduction Agency (DTRA). As contracting officer, **Mr. Staudt** is guided by Federal Acquisition Regulations requiring that he exercise sound discretion on whether significant conflict of interest exists; and if it does, to develop rules for resolving it. To that end, NIOSH and SC&A had many exchanges, and on June 29th SC&A provided **Mr. Staudt** some proposed mitigation strategies. After careful consideration, the firewall strategy was chosen.

This strategy requires that SC&A provide non-disclosure agreements for the work, as well as computer password protections. **Mr. Staudt** is charged with auditing invoices to find out who is working on what project.

Mr. Staudt sent an e-mail to the Board informing them of the resolution, noting that his main goal is to minimize any perceived or real conflicts of interest, and SC&A has been quick to fully implement the strategy. **Mr. Staudt** observed he is relying on the Board and the general public for feedback related to conflicts of interest so that such conflicts of interest can be mitigated. He described the firewall strategy's benefits to the Board, and emphasized it augments SC&A's original COI plan, which does not cover DoD activities.

Without objection from the Board, **Dr. Ziemer** asked that **Mr. Staudt** take the lead in drafting a document the Board could adopt as an addendum to the SC&A COI policy. It could then become formalized and posted on the web site. The document is due at the next Board meeting. Because Board members already receive monthly progress reports which include the costing, it was deemed unnecessary for Board members to receive DTRA contract billing information, which will continue to be reviewed by **Mr. Staudt**.

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PUBLIC COMMENT SESSION

The following is a list of the members of the public who spoke. A full transcript of the public comment is available on the OCAS website, www.cdc.gov/niosh/ocas.

Ms. Terrie Barrie, Alliance of Nuclear Worker Advocacy Group; Ms. Kay Barker, claimant; Mr. John Funk, Atomic Veterans and Victims of Nevada; Ms. Patty Cook, claimant; Ms. Dorothy Clayton, claimant; Dr. Jacob Paz, former NTS industrial hygienist; Dr. Knut Ringen, Center to Protect Workers' Rights; Mr. Brian Dodd, President, Health Physics Society; Ms. Sandra Jackson, claimant.

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With no further comments, the Board recessed until the following morning.

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Wednesday, September 20

Dr. Ziemer called the second day to order with reminders to register attendance, sign up for public comment, and to make use of the handouts provided as desired.

Dr. Wade joined in welcoming the public and made some informational remarks about the day's planned topics.

WORKING GROUP UPDATES

Savannah River Site

Mr. Michael Gibson, Chair
Site Profile Workgroup

Mr. Gibson apologized for the delay in providing the findings matrix, and acknowledged the assistance of **Messrs. Larry Elliott** and **Sam Glover** from NIOSH and **Dr. John Mauro** and **Mr. Joe Fitzgerald** from SC&A in its production. Referring to that document, **Mr. Gibson** explained a recent meeting in Cincinnati between the workgroup, NIOSH and SC&A had resulted in a resolution of several issues. There remain some open issues which are more site-wide than specific to SRS. **Mr. Gibson** reported that NIOSH revisions and SC&A responses are in progress, and he feels the remaining issues could be resolved at a workgroup meeting to be held in the near future. He noted good progress is being made on resolution of issues working within the six-step process.

Discussion Points:

- The SRS site profile was one of the earliest completed, thus requiring perhaps more clarification and more thorough and expanded information to the dose reconstructors.
- Of the 16 total issues raised in the review, five or six have been closed out and many of the remainder are generic.
- While there are no showstoppers, the most significant open issue relates to characterization of tank farms and associated databases.
- The important issue of construction trades workers is now addressed by the recently-released OTIB-52.
- This site profile and review were completed two years ago, and the site profile is to be revised. Existence of accident report data from the tank farms has come to light, but is being maintained by a private company that has not made the materials available. NIOSH is working to resolve questions of access and the issue of paying for data, since it was originally developed with government funds.
- More information was requested on the issues of high flux programs.

- Details and implications of the organically-bound tritium matter; lack of solubility is a key issue.
- The nature of the neutron log books.

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Nevada Test Site

Mr. Robert Presley, Chair
Site Profile Workgroup

Mr. Presley described the working experience of his group's members as it related to their familiarity with this site's issues. He acknowledged the assistance provided by the SC&A group, including **Dr. Arjun Makhijani** and **Mr. Joe Fitzgerald**, as well as that of **Mr. Mark Rolfes** from NIOSH. Providing a history of the site profile itself, **Mr. Presley** included the status of issues, listing these considered major and including site-specific issues discussed during the group's recent teleconference. He noted that policy or guidance is being assessed or redefined for the issues of breathing and ingestion, badge geometry, employee misuse of dosimetry, extremity dose interpretation, and high-fired or super S plutonium. **Mr. Presley** reported that site expert interviews will be added, and while much work remains to be done, all involved are working hard to arrive at closure on this review as soon as possible.

Discussion Points:

- Most of the 12 closed-out comments relate to pre-1962 issues.
- The term "draft documents in review" refers to completed documents which are in review by NIOSH.
- The color highlighting in the NTS matrix was a method of identifying speakers with their comments.
- Many of the NTS issues are complex-wide.
- Each outstanding issue has been assigned to a specific person or group of individuals in the workgroup for their focus.
- Prospective matters for Board discussion in terms of site profile reviews.
- Cross-cutting generic issues are most expeditiously addressed in individual site profiles.

Mr. Presley acknowledged and thanked **Dr. Genevieve Roessler** and **Ms. Wanda Munn** for their assistance in the presentation.

Dr. Wade remarked on the need for a mechanism to track and review agreed-upon issues, such as modification of a site profile, after the workgroups have completed their work.

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Special Exposure Cohort Report

Dr. James Melius, Chair
Petition Activity Workgroup

Dr. Melius reported the workgroup had issued a task order for SC&A to do some data-gathering concerning the issue of evaluating doses for workers with high exposure to radiation, difficult to evaluate doses, and exposure within very short time periods. He indicated the workgroup is currently concerned more with the health endangerment part of the regulations than the ability to reconstruct dose with sufficient accuracy.

The SC&A task includes fact finding, to provide a better understanding of the type of exposures that would occur in criticality incidents; evaluating exposures at NTS, PPG and Ames Laboratory, and comparing them with criticality incidents; and exploring ways of classifying the different categories of employees under consideration to determine how this SEC class would be composed.

A meeting is planned with an eye toward resolving the issues, with presentation to the Board by its December meeting.

Discussion Points:

- SC&A is now reviewing a paper by **Dr. Mike Thorne** on criticality doses and events, which they commissioned. They feel they have a good handle on this concern.
- **Dr. Lynn Anspaugh**'s work on the NTS resuspension, which has implications for the less-than-250-day issue, will be completed in the coming weeks.
- SC&A will be conducting an internal review of some external dose data on each test series at PPG and NTS. The review will be particularly intensive if the data-gathering involves COI questions.

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SUBCOMMITTEE REPORTS AND BOARD ACTION

Dr. Paul Ziemer, Chair

Mr. Mark Griffon

Mr. Griffon stated that he had drafted a document summarizing the Board's findings from the second and third sets of case reviews, cases 21 through 60. That document, in the form of a letter, is a report from the Board to the Secretary.

It was determined that two attachments were not available at the moment, and were necessary before a vote could be taken on adopting the letter report. **Dr. Ziemer** indicated he would take it by consent that the vote would be postponed until all Board members had copies of all attachments. The vote was deferred until the Board working session on Thursday.

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UPDATE ON ROCKY FLATS SEC PETITION

As background, **Dr. Wade** explained this workgroup was originally tasked to review the Rocky Flats site profile. When the Board received an SEC petition evaluation report, the group shifted its focus onto site profile issues most pertinent to the SEC petition debate. No members are conflicted with regard to the Rocky Flats SEC petition.

Mr. Mark Griffon,
Workgroup Chair

Mr. Griffon announced that while this workgroup has tracked several issues in a lengthy matrix, for this presentation he would focus only on seven main items that could affect the decision-making process relative to the SEC petition.

SC&A has reviewed NIOSH's procedure for addressing super S or high-fired plutonium and is comfortable with the methodology. Of 25 cases available to develop NIOSH's design cases, the final action item is for SC&A to spot-check those not used to be sure the design cases do in fact bound the situation of the 1965 fire.

Concerns regarding other radionuclides outside plutonium and uranium included whether they were a significant source term; whether there was exposure potential; if so, who was likely exposed, over what time periods, and how NIOSH proposes to reconstruct those doses. SC&A has not fully reviewed NIOSH's recently-delivered preliminary report.

Dose reconstruction method has set several activities in motion. They include questions on the coworker model being proposed in OTIB-58;

final checks on the neutron-to-photon ratio being used in a method to estimate neutron doses when they don't have neutron badges, a ratio that's part of the coworker model; whether Neutron Dose Reconstruction Project (NDRP) records were validated against any raw records. Notwithstanding the question of data reliability, the coworker method may be more of a site profile issue if that model can be used to calculate a maximum plausible dose.

The internal coworker model used in OTIB-38 has open questions including whether the maximally exposed people were actually sampled for all the time periods and whether the distribution can be used to represent all the workers of concern in this SEC petition; the appropriateness of using an epidemiological database to develop a coworker model, in this case the CER dosimetry database; the pedigree of databases, particularly HIS-20, used to develop the coworker models. **Ms. Donna Cragle** from ORAU is investigating on behalf of the workgroup. NIOSH has provided SC&A a white paper explaining the basis for the coworker model.

The most extensive items on the matrix relate to data reliability. **Mr. Griffon** described two broad categories as a systemic analysis seeking to detect any problems in database records that would make it a broad problem for many petitioners* within this petition; and specific allegations made by petitioners which the workgroup aims to group into categories of concerns that would impact the entire petitioning class or one of its subsets.

Mr. Griffon elaborated on requests made to NIOSH and action items pending in furtherance of resolution in the two categories.

Being regarded as a separate item of data reliability concern is that of questions related to dosimetry and the 1969 fire. SC&A has asked for identifiers for the workers sent for lung counts, which will be used to check some of the original radiation records of individuals and attempt to resolve the issue of gaps in the 1969 database.

The question behind the last issue concerns whether there is sufficient data during the D&D time frame to reconstruct dose for all potentially exposed workers. NIOSH has had difficulty obtaining radiation worker-2 rosters for those time periods in order to cross-check the database and confirm workers were monitored. In lieu of that, NIOSH has provided an internal audit of the dosimetry program during the D&D time period, but it has not yet been reviewed by SC&A.

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Discussion Points:

- Handling of allegations about data integrity by requiring proof from NIOSH that data is reliable for the entire class.
- Despite the level of detail involved in this site overview, and recognizing that every dataset has deficiencies, no system-wide deficiencies have been found at this site and every effort is being made to ensure data reliability.
- Origin, history, contents and reliability of the HIS-20 database.
- History of handwritten and electronic urinalysis reporting at RF.
- Anomalies between HIS-20 and the Epi Database data.
- Petitioner's copy of a 1982 handwritten urinalysis record will be followed up in the workgroup format.
- Petitioners would like the vote on this petition to be held in Denver.
- How COI issues are being addressed and ORAU compliance with most restrictive or most recent COI policy.
- Whether a revision of the RF site profile will take place based on ORAU's Conflict of Interest review, and a detailed description of efforts to accomplish that review, the process and schedule for its review by NIOSH.
- Identification of Mr. Robert Meyer as the document owner on the Rocky Flats site profile.
- Clarification on ownership of the Rocky Flats SEC evaluation report.
- Details of what ORAU is doing regarding SEC evaluation reports with respect to COI.
- A request for attribution of the SEC evaluation report work completed by ORAU.
- Clarification that ORAU references to COI include both individual and corporate conflicts.
- How conflicts are being handled by ORAU under the current policy, which is draft in nature.
- Clarification that ORAU has a corporate conflict on Rocky Flats due to its dose reconstruction work at the site.
- NIOSH's position on ORAU's corporate COI as it relates to the neutron dose reconstruction project.

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SC&A TASKING PREPARATIONS

Dr. John Mauro,
Sanford Cohen & Associates

At **Dr. Wade**'s request, **Dr. Mauro** presented a report on procedures and Technical Information Bulletins previously reviewed by SC&A through

means other than the procedures review task, which could include via dose reconstruction or site profile reviews. He enumerated seven documents in that category.

With procedures to be reviewed yet unassigned for the coming year, **Dr. Mauro** offered his suggestions for an assortment of documents, both site-specific and generic.

Discussion Points:

- How to follow up on completed work and know it is complete.
- How to determine, for procedures reviewed and then revised, whether the complete reasons for revision have been captured.
- How to use the matrix as a tracking tool for revised and in-revision procedures, side by side with program actions.
- Clarification that review of workbooks is not a stand-alone deliverable, but included with review of Technical Information Bulletins, procedures, and some site profiles.
- How to track reviews and the significance of changes made through the course of multiple revisions and subtasks.
- Workbooks are primarily reviewed when SC&A audits a dose reconstruction.
- SC&A is in the process of reviewing site-specific workbooks, including min/max and best estimate workbooks, under Tasks I and III. These are stand-alone products, with delivery expected in a month.
- Workbooks are reviewed in relation to the linked procedures rather than as a product in themselves.

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OAK RIDGE INSTITUTE OF NUCLEAR STUDIES
SEC PETITION EVALUATION REPORT

Mr. LaVon Rutherford,
NIOSH, OCAS

Mr. Rutherford gave a brief history of the petition, noting that ORINS is the predecessor name for ORAU, and that Oak Ridge Institute of Nuclear Studies Cancer Research Hospital was a single part of ORINS. Recognizing their contractor would be conflicted on this petition, NIOSH determined to conduct the evaluation internally.

Mr. Rutherford detailed radiological operations which took place at ORINS from 1950 to the mid-'70s, noting it was not a typical weapons complex facility. NIOSH looked at a number of different documents and information sources, including the existing ORAU TIBs, ORINS staff

interviews, NIOSH database case files that fit within the class definition, the site research database, documents and affidavits submitted by the petitioner, documents from ORAU at Oak Ridge, and the PubMed database. **Mr. Rutherford** reported occupational eternal exposures were well-documented; film badges had been used from the very beginning, and a 1951 three-month report documented exposures.

Although the hospital had originally felt that potential for internal exposures was low, NIOSH's research recognized scenarios for internal exposure issues, which **Mr. Rutherford** detailed. He summarized the availability of data for external and internal dosimetry.

NIOSH's evaluation determined that it is not feasible to estimate dose for the covered class with sufficient accuracy, and individuals within the covered class could have received internal exposures from working with medicines containing radioisotopes. The covered period as proposed by NIOSH is from May 15, 1950 through December 31, 1963. **Mr. Rutherford** explained the period is based on admission of the hospital's first cancer patient in 1950 and the initiation of source term applications in early 1964.

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PETITIONER PRESENTATION

Mr. George Eldridge, Petitioner

Speaking on behalf of himself, his brother and sister, **Mr. Eldridge** thanked NIOSH for making clear that X-10, also known as the Oak Ridge National Laboratory, and the ORINS Cancer Hospital are indeed two separate facilities. He also thanked **Mr. Rutherford** and the Advisory Board.

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BOARD DISCUSSION

Discussion Points:

- Lack of evidence of leak tests done on radium sources.
- Lack of availability of early records on amounts of iodine used in therapy treatments; availability begins around 1964.
- Availability of some annual source term data.
- Minimal indication of the use of hoods for preparation of the medicines in the early years.
- Clear evidence for use of hoods in the later years.

- Why the original covered period only went through 1956.
- The number of claimants who might be in this petition.
- Development and later operational use of whole body counters.
- Clarification on the status of internal dose.

***

BOARD DECISION

Dr. Ziemer observed this petition comes as a recommendation from NIOSH, and the Board must make its separate recommendation to the Secretary. **Ms. Munn** commended the tremendous advances in nuclear medicine made by such a small group in such a short time.

A motion was made and seconded the Board accept the NIOSH proposed class as stated in its report.

Dr. Ziemer inquired relative to bioassay at X-10 and Y-12 during the petition years and why ORINS would not have had bioassay. **Mr. Rutherford** explained there was gross alpha and gross beta measurement at Y-12 where the isotopes were developed using the Cyclotron, but no bioassay data specifically used for those facilities at that time, and none at ORINS.

Dr. Melius questioned to what extent the Board is to specify what NIOSH can do in terms of dose reconstruction, particularly with regard to external exposures. **Mr. Hinnefeld** supported incorporating Board acknowledgment of NIOSH's determination in its recommendation. **Dr. Ziemer** noted that in past recommendations the Board has recognized the ability of NIOSH to do certain types of DRs, such as external only.

Through friendly amendment, the motion was amended to state that the Board recommends the following letter be transmitted to the Secretary of Health and Human Services within 21 days. Should the Chair become aware of any issue that, in his judgment, would preclude the transmittal of this letter within that time period, the Board requests that he promptly informs the Board of the delay and the reasons for this delay, that he immediately works with NIOSH to schedule an emergency meeting of the Board to discuss this issue.

The Advisory Board on Radiation and Worker Health (the Board) has evaluated SEC Petition-00033 concerning workers at the Oak Ridge Institute of Nuclear Studies (ORINS) under the statutory requirements established by EEOICPA incorporated into 42 CFR 83.13(c)(1) and 42 CFR Section 83.13(c)(3). The

Board respectfully recommends that a Special Exposure Cohort be accorded to all employees of the DOE or DOE contractors or subcontractors who were monitored, or should have been monitored, while working at the Oak Ridge Institute of Nuclear Studies' Cancer Research Hospital from May 15, 1950 through December 31, 1963, and who were employed for a number of work days aggregating at least 250 work days during the period from May 15, 1950 through December 31, 1963, or in combination with work days within the parameters established for one or more other classes of employees in the SEC. This recommendation is based on the following factors:

This facility conducted research on the use of various radioactive isotopes for the treatment of cancer. People working in this facility were exposed to these radioactive materials through a number of work activities. Although there was a potential for substantial internal exposures arising from preparing, administering and disposing of radioisotopes and radioactive waste, NIOSH found no evidence of personnel or workplace monitoring that could be used to bound internal radiation exposures.

As a result of these limitations, NIOSH cannot establish a maximum internal exposure scenario that addresses all of the internal exposure potential for the petitioning class and therefore cannot estimate internal doses for this class with sufficient accuracy. The Board concurs with this demonstration.

NIOSH determined that health was endangered for the workers at the Oak Ridge Institute of Nuclear Studies' Cancer Research Hospital exposed to radiation at this facility during the time period in question. The Board concurs with this determination.

The NIOSH and Board review of the data found that it was sufficient to support accurate individual dose reconstructions for external doses for workers at the ORINS Cancer Research Hospital.

Enclosed is supporting documentation from the recent Advisory Board meeting held in Las Vegas, Nevada where the Special Exposure Cohort was discussed. If any of these items aren't available at this time, they will follow shortly.

The motion carried unanimously.

Dr. Ziemer noted the recommendation will be forwarded to the Secretary in accordance with the requirements of the motion itself. He asked

petitioners to recognize that although the Board is making the recommendation, the petition is not at this point granted.

* * * * *

PREPARATION FOR BOARD TASKING ON ADDITIONAL SITE PROFILES FOR 2007

Mr. Stu Hinnefeld, NIOSH

Mr. Hinnefeld presented the information requested the previous day, providing the following lists:

Sites with site profiles and a qualified SEC petition; other qualified petitions not on the previous list; site profiles under development which should be available in time for SC&A's review process; generic TBDs being prepared by Battelle; ORAU sites in preparation, plus the Sacandaga site and the Special Separations Unit, both unlisted; and a list of completed cases per site.

Discussion Points:

- The range of difference in workload represented by various choices.
- An explanation as to nuclear activity at the Kansas City Plant.
- A suggestion to consider sites with the largest number of claimants, and five fairly different types of facilities.
- Suggestions as to actual facilities to be considered.
- A description of the activities at Atomics International line (formerly ETEC).

Dr. Ziemer reminded the Board that action was not immediately needed.

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CHAPMAN VALVE SEC PETITION NIOSH EVALUATION REPORT

Dr. Brant Ulsh, NIOSH

Dr. Ulsh began with a brief history of the worked performed for the Atomic Energy Commission and for Manhattan Engineering District at this facility. Their covered work in 1948 was machining natural uranium slugs used in the Brookhaven reactor. All uranium scrap was removed by the end of that same year and a brief D&D process occurred in the early '90s.

Dr. Ulsh detailed the qualification process for the petition, its announcement in the *Federal Register*, specifics of the initial proposed class and its expansion by NIOSH to cover all possible operations at the facility, including the D&D effort. Of the sources of information available to inform their evaluation, NIOSH relied most heavily on individual dosimetry records, both internal and external. They also located several source documents in the site research database and used documentation provided by the petitioners. Speaking to the issue of feasibility, the status of the Chapman Valve claims as of September 13 include 124 cases meeting the class definition, with completed DRs for 92 of them.

Seven bases formed the SEC petition. They are presented here, each with NIOSH's evaluation.

1.The petition expressed concern that bioassay measurements were insufficient in number and did not capture the most exposed individuals at the facility.

NIOSH has 33 bioassay measurements of 100 workers who operated with uranium over a 7-month period, and seven additional measurements which associated with the fire. Bioassay results tend to follow a lognormal distribution, and 33 of 100 represents a fairly sizeable sample, from a statistical standpoint.

2.The petition questioned representativeness of the bioassay samples.

NIOSH has job titles associated with the bioassay measurements which include a range of job functions, encompassing functions with the highest anticipated exposures and some with lower exposure potentials. Of the 33 bioassay sample results not associated with the fire, one was above the detection limit for the method employed at the time, indicating this operation had a fairly low exposure potential.

3.The petition expressed concern over data sufficient to support a plausible upper bound, which deals with NIOSH's ability to bound doses; petitioners feel NIOSH does not possess sufficient monitoring, process knowledge and/or source term data.

NIOSH has the best data for this situation, individual bioassay and dosimetry results, in addition to process knowledge.

4.The petition expressed concern that data is insufficient regarding the uranium fire of June, 1948.

NIOSH concluded there is sufficient data to adequately model any intakes resulting from the fire. They have the set of seven bioassay samples taken June 11, 1948 from workers clearly identified as individuals involved in responding to the fire. Claimant-favorable assumptions can be made using those even bioassay results, four of which were above the detection limit.

5.The petition suggested the possibility that workers handled enriched uranium.

The sole evidence consists of one debris sample collected several decades after the conclusion of AEC-related work. Some former workers informed NIOSH they also did radiological work for other entities, possibly the Navy.

NIOSH concluded that even if enriched uranium were present during the covered period, it does not prevent NIOSH from doing DRs at sufficient accuracy; the internal doses would be higher, but the number is boundable.

6.The petition contends the site profile does not account for potential exposures that might have resulted from rolling or operation of a cracking furnace or chip burner, and that there was only one day of uranium air sampling.

NIOSH concluded that any and all processes are reflected in the available bioassay results. In the hierarchy of DR data, individual bioassay ranks above air data. And while air data results are used for comparison with other sites, they are not used for dose reconstruction.

7.The petition expressed concern that the site profile provided inadequate treatment of routine uranium fires.

NIOSH concluded that any intakes from possible fires would be reflected in the bioassay results.

In summary, NIOSH reports the answer to the first prong of the test is "yes." Regarding feasibility of reconstructing dose with sufficient accuracy for members of the class, NIOSH has sufficient data. The report summarizes the class as workers who worked at Chapman Valve from January 1, 1948 until the end of 1949, and also again in the early '90s from the remediation period.

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PETITIONER COMMENT

Ms. Mary Ann Realle

Ms. Realle thanked fellow petitioners, Senators Kennedy and Kerry and Congressman Neal and their staffs, and NIOSH and the Board for the opportunity to speak. She chastised NIOSH for their failure to issue their evaluation report by the deadline, as well as their failure to provide technical assistance to petitioners in addressing the health physics issue or preparation for today's meeting.

Ms. Realle detailed the comments made to NIOSH in February, 2006 by Chapman Valve families concerning the draft site profile, remarking that NIOSH issued the site profile the next day without accounting for any of those comments. She observed that DOL has remanded Chapman Valve DRs back to NIOSH as a result of the omission.

Ms. Realle expressed the following contentions:

The NIOSH coworker model is based on unrepresentative data; the most exposed workers were not monitored; during deliberations on the Iowa Ordnance Plant SEC NIOSH admitted the cohort sampling used was not representative of the most exposed workers; the SEC evaluation report assertion that workers would have had bioassay samples taken on the day they were exposed to incinerator operations is uninformed speculation; the report makes no effort to resolve the question of enriched uranium; NIOSH has not demonstrated its assertion that maximum dose can be estimated.

Ms. Realle concluded by asking, on behalf of the petitioners, that the Board review the raw data to understand the basis of their contentions; to task SC&A with reviewing the SEC evaluation report; and to withhold judgment until a revised site profile is issued. She then designated **Mr. Richard Miller** from the Government Accountability Project to assist in the petitioners' presentation.

Written statements from **Senators Edward M. Kennedy** and **John F. Kerry**, and **Congressman Richard E. Neal** in support of the petition were read into the record and are available in their entirety at the NIOSH/OCAS web site, www.cdc.gov/niosh/ocas.

Mr. Miller supplemented the petitioners' presentation with the following technical points:

- The DRs to date do not account for enriched uranium, the origin of which is unknown, but which NIOSH acknowledges cannot be attributable to background levels. Enriched uranium does not occur in nature.

- If enriched uranium did arise from a Naval reactors program, it must be accounted for within the provision of law, the 2004 amendments to the Defense Authorization Act, which define radiation dose.
- Regarding representativeness of data, **Senator Kennedy**'s staff advised that the highest exposed job category of brusher was not even mentioned in either the site profile or the evaluation report. A close look at the raw data by someone qualified was suggested.
- The date of the fire is unknown, and being off by as little as a week involves a 50 percent change in the amount of uranium intake for an individual. He advised assignment of conservatism to the fire date.
- Leaving aside the issue that the most exposed individuals were not sampled, NIOSH's assumption that bioassay automatically acted as an umbrella to capture all relevant exposures is flawed due to the lack of event dates and the question of whether bioassay was taken before or after such events.

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Discussion Points:

- Clarification on the number of individual bioassay samples.
- NIOSH's handling of the question of the date of the fire with a worst-case scenario assumption.
- Clarification that even with the 50 percent difference asserted by **Mr. Miller**, the number is nonetheless boundable.
- The need for more demonstration of the possibility of dose reconstruction before reaching a conclusion on this petition.
- The number of people working at the facility.
- The possibility that the highest exposed individual on a site could be someone with no external exposure.
- A notation on highest internal and external exposure potentials.
- A comment that internal and external exposures could coincide, but not necessarily.
- Such exposures are not mutually exclusive and the burden is on NIOSH to show that its assumptions are demonstrated in the data.
- The possibility of NIOSH comparing this data to similar processes at other facilities.
- Explanation of the time frames and processes considered in defining the time period for the SEC.
- Whether use of the contaminated facility continued.
- Radioactive materials other than uranium used at the facility.
- Clarification that NIOSH is using coworker models for calculating internal dose.

- How many claimants have individual bioassay results.
- Whether other production processes are missing from the report.
- Whether intake estimates derived from air sampling levels were consistent with those from urinalysis samples.

*** * ***

A motion was made, clarified and seconded that the Board request SC&A do further evaluation as a site profile task, and report back to the Board before further action is taken.

Discussion Points:

- The intent of the motion is that SC&A's work be done as an SEC task.
- The motion, if approved, would delay action in terms of a recommendation from the Board, although the intent is to be expeditious.
- NIOSH is again being asked to prove a process it has proved repeatedly.
- NIOSH has not adequately demonstrated its ability to do DRs at this facility.
- The workgroup process is working, exemplified by NIOSH's acknowledgment that certain subsets of dose reconstruction questioned by the workgroup resulted in NIOSH admission of inability to do DRs.
- If the motion were to pass, SC&A could have a draft report within two months.

Before calling for a vote, **Dr. Ziemer** paraphrased the motion as one to defer action on the petition and to task SC&A to assist the Board in assessing the issues related to the petition as they've been discussed.

The motion passed, with two abstentions.

There were no conflicts of interest relative to Chapman Valve. Additional petitioner comments consisted of thanks to the Board.

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BOARD WORKING TIME

A workgroup was appointed to focus on Chapman Valve SEC petition issues. **Dr. Poston** will chair. Other members are **Mr. Griffon**, **Mr. Clawson**, **Dr. Roessler** and **Mr. Gibson**.

Concerning the Subcommittee activity relative to individual dose reconstruction reviews of cases 21 to 60, or Rounds 2 and 3, **Dr. Ziemer** noted the package comes as a recommendation, and thus a motion requiring no second, that the Board accept the package and that it be forwarded to the Secretary. There was the caveat that **Mr. Griffon** will first check the numbers for accuracy.

The motion to accept the package as the Board's report to the Secretary, subject to minor editorial changes, carried unanimously.

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PUBLIC COMMENT PERIOD

Dr. Ziemer called the meeting back to order, and provided a definition of the role of the Board, what it does and does not do under its charter. He introduced the Board members and gave brief summaries of their respective backgrounds.

Public comment was offered by the following, whose statements in their entirety may be found on the NIOSH/OCAS web site, www.cdc.gov/niosh/ocas:

Mr. John Funk, claimant; Ms. Jan Gaunce, survivor; Ms. Dianne Hanna Rudnicki, survivor; Mr. Robert Kromrei, former NTS employee; Ms. Patricia Niemeier, survivor; Ms. Lori Hunton, survivor; Ms. Kathleen Rozner (Senator Harry Reid staff member) reading a statement from Mr. Gene Campbell, claimant; Ms. Shirley Breeden, survivor; Ms. Dee Crafton, survivor; Ms. Jane Ann Williams-Lenz, survivor; Ms. Margaret Minster Cooley, survivor; Ms. Diane Milko Sbrocchi, survivor; Mr. William G. Morton, survivor; Ms. Alma Lee Mosley, survivor.

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With no further comments, the Board recessed until the following morning.

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Thursday, September 21

Dr. Ziemer opened the third and final day of the meeting with a welcome to all and a reminder to register attendance.

LOS ALAMOS NATIONAL LABORATORY
SEC PETITION EVALUATION REPORT

Dr. Wade announced **Dr. John Poston** as the sole Board member conflicted with regard to the site and unable to participate in the discussion and deliberations. **Dr. Poston** joined the audience.

Mr. Stuart Hinnefeld, NIOSH

Mr. Hinnefeld detailed Petition 61 concerning LANL workers' exposure to radioactive lanthanum (RaLa), explaining this 83.14 petition occurs under part 14 of the rule regarding addition of classes to the SEC.

Mr. Hinnefeld gave specifics of locations, time periods and purpose for work with RaLa, describing the mechanisms by which radioactive lanthanum was dispersed. He announced there are no personnel bioassay monitoring results for internal exposure, or air monitoring data. However, he explained NIOSH believe it will have records sufficient to do dose reconstruction for occupational medical and external exposures.

NIOSH defined the covered period as September 1, 1955 through July 18, 1963. The conclusion reached through the two-pronged test is that it is not feasible to estimate with sufficient accuracy the internal radiation doses, and that the health of the covered employees may have been endangered.

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PETITIONER PRESENTATION

Ms. Harriet Ruiz, New Mexico state representative and survivor claimant, requested the Board hold its March, 2007 meeting in New Mexico for the benefit of the claimants.

Mr. Andrew Evaskovich, International Guards Union of America, Los Alamos Local Number 69, contended the TBD is not sufficient. Comments from his group's meeting with a NIOSH representative were not taken into account. The meeting occurred after the TBD was written. He expressed a need for correction of the TBD and to look at possible development of other classes.

Ms. Michele Jaques-Ortiz, District Director for **Congressman Tom Udall** of New Mexico, queried how the Department of Labor would determine potential for RaLa operations exposure in light of NIOSH's evaluation report, which states in Section 4.5 that NIOSH is unable to rely solely on worker job descriptions. She explained the Congressman had sent her to the meeting in order to urge the Board include wording in its letter to Secretary Leavitt to the effect that, in the absence of work history

to the contrary, workers at the LANL facility who were employed during the class period shall be presumed to be RaLa workers. A further request is that the letter clarify that external and medical dose can be constructed by NIOSH, noting this point would allow DOL to adjudicate external dose for the non-SEC cancers. She urged the use of explicit wording due to concerns regarding DOL, as well as the passback memo.

* * *

Dr. Wade explained the Board is not limited in speaking as clearly as it wishes in its recommendations to the Secretary of HHS. **Mr. Elliott** underscored NIOSH's practice of sharing their carefully-crafted definition of a class with DOL to ensure its effective use in determining eligibility on behalf of claimants. DOL has indicated the LANL class definition prepared by NIOSH can be worked with effectively.

Discussion Points:

- Questions were posed to test NIOSH's assertion of inability to reconstruct dose.
- Whether airborne radiation resulted from the volatility of radioactive lanthanum or from the explosions.
- Why NIOSH cannot bound the air intakes for indoor work.
- Clarification that the explosion tests took place outside.
- Clarification on whether NIOSH requires claimants to file an affidavit.
- How the 250-day rule comes into effect.
- NIOSH concluded it cannot make realistic estimates of exposure with regard to a specific duration of time. Furthermore, they are past the issue of presence, although these exposures were not in the acute range of criticality accidents.
- Biological plausibility of cancer risk from exposure to RaLa implosions at the rate of once a month for less than a year's period of time.
- Dose estimation was deemed infeasible due to the multitude of process steps, along with uncertainties due to impurities in the explosion.
- Why bioassay records were so minimal for this particular operation during the given time frame.
- NIOSH's conflicting considerations regarding biological plausibility in light of the LANL RaLa exposures' similarities and dissimilarities with criticality events.
- The SEC evaluation workgroup's report may provide a different approach or understanding to this complex of concerns.

A motion was made and seconded that the Board recommend the following letter be transmitted to the Secretary of Health and Human Services within 21 days. Should the Chair become aware of any issue that, in his judgment, would preclude the transmittal of this letter within that time period, the Board requests that he promptly informs the Board of the delay, the reasons for this delay and that he immediately works with NIOSH to schedule an emergency meeting of the Board to discuss this issue.

The Advisory Board on Radiation and Worker Health (the Board) has evaluated SEC Petition 00061 concerning workers at the Los Alamos National Laboratory under the statutory requirements established by EEOICPA and incorporated into 42 CFR Section 83.13 and 42 CFR Section 83.14. The Board respectfully recommends a Special Exposure Cohort be accorded to all employees of the DOE, predecessor agencies and their contractors or subcontractors who were monitored, or should have been monitored, for exposure to ionizing radiation associated with radioactive lanthanum (RaLa) operations at Technical Area 10 (Bayo Canyon Site), Technical Area 35 (Ten Site) and Buildings H, Sigma and U (located within Technical Area 1) at the Los Alamos National Laboratory for a number of work days aggregating at least 250 work days during the period from September 1, 1944 through July 18, 1963, or in combination with work days within the parameters established for one or more other classes of employees in the SEC.

This recommendation is based on the following factors:

1. **People working in these areas of Los Alamos National Laboratory were associated with radioactive lanthanum operations as part of the early development and testing of nuclear weapons. In reviewing the available monitoring data for these operations, NIOSH found it did not have access to sufficient information, including internal personal dosimetry, workplace monitoring, or sufficient process and radiological source information, that would allow it to estimate with sufficient accuracy the potential internal RaLa doses to which members of the proposed class may have been exposed. The Board concurs with this determination.**

2. **NIOSH determined that health was endangered for the workers exposed to radiation in these areas of LANL within the time period in question. The Board concurs with this determination.**

3. The NIOSH review of data found that it was sufficient to support accurate individual dose reconstruction for external doses and occupational medical doses for workers at the areas in question at the Los Alamos National Laboratory. The Board concurs with this determination.

In their evaluation NIOSH determined that it was difficult to identify people who worked in these areas of LANL based on job classifications. Therefore the Board recommends that determination of eligibility for this class take into account this difficulty. In the absence of work history or other information to the contrary, workers at the LANL facility during the time period in question should be presumed to have worked in the areas in question.

Enclosed is supporting documentation of the recent Advisory Board meeting held in Las Vegas, Nevada where the Special Exposure Cohort was discussed. If any of these items are not available at this time, they will follow shortly.

The above motion reflects revisions made as a result of discussion on how to most clearly and accurately define the workers. Consideration was given to matching the NIOSH description of the class. It was clarified that the possibility of other nuclides or bioassays might allow for reconstruction of doses other than radioactive lanthanum. With a non-covered cancer NIOSH would attempt a partial dose reconstruction using external exposure, and possibly internal exposure, but not dealing with lanthanum.

The motion carried unanimously.

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S-50 SEC PETITION EVALUATION REPORT

Mr. Stu Hinnefeld, NIOSH

Mr. Hinnefeld outlined Petition Number 00060 relating to the S-50 Thermal Diffusion Plant, site of an early attempt to enrich uranium. NIOSH defined the covered period as July 9, 1944 through December 31, 1951. Lacking exposure data sufficient to perform a feasible dose reconstruction, NIOSH proceeded with an 83.14 petition.

Mr. Hinnefeld provided a brief history of the plant. Regarding the processes relevant to dose reconstruction, he explained the thermal diffusion process at the facility and detailed the availability of DR data. NIOSH was unable to obtain air monitoring data or personnel

monitoring results for either external or internal exposures. Contemporaneous information reports indicate significant uranium release during attempts at diffusion. The limited information from direct radiation and contamination surveys is insufficient for dose reconstruction in terms of magnitude and time. However, enough is known about the medical monitoring program in this period to allow NIOSH to develop protocols to reconstruct occupational medical dose for people in the class.

In terms of feasibility, NIOSH found it lacked the monitoring, process and source term information to estimate with sufficient accuracy the internal or external doses for all members of the class, but they believe they do have sufficient information to estimate the medical exposures. NIOSH believes that health may have been endangered due to the nature of the operation, the use of UF-6 vapor, and the lack of information to bound workers' potential exposures. The proposed class definition in NIOSH's evaluation report is expressed as all employees of the DOE and its predecessor agencies and their contractors and subcontractors who were monitored, or should have been monitored, for ionizing radiation at S-50 Thermal Diffusion Plant for 250 days during the covered period.

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PETITIONER RESPONSE

No petitioners were available to make comment on this petition.

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Discussion Points:

- Why a monitoring program would not have been in place at the site.
- Whether the workforce at S-50 included employees from Y-12, K-25 or N-50.
- An exploration of the use of off-site workers and their monitoring.

A motion was made and seconded that the Board recommend the following letter be transmitted to the Secretary of Health and Human Services within 21 days. Should the Chair become aware of any issue that, in his judgment, would preclude the transmittal of this letter within that time period, the Board requests that he promptly informs the Board of the delay, the reasons for this delay and that he immediately works with NIOSH to schedule an emergency meeting of the Board to discuss this issue.

The Advisory Board on Radiation and Worker Health (the Board) has evaluated SEC Petition 00060 concerning workers at the Oak Ridge National Laboratories under the statutory requirements established by EEOICPA and incorporated into 42 CFR Section 83.13 and 42 CFR Section 83.14. The Board respectfully recommends a Special Exposure Cohort be accorded to all employees of the DOE, predecessor agencies and their contractors or subcontractors who were monitored, or should have been monitored, while working at the S-50 Oak Ridge Thermal Diffusion Plant for a number of work days aggregating at least 250 work days during the period from July 9, 1944 through December 31, 1951, or in combination with work days within the parameters established for one or more other classes of employees in the SEC.

This recommendation is based on the following factors:

1. **People working in S-50 Oak Ridge Thermal Diffusion Plant were employed in a wartime uranium enrichment facility from July 8, 1944 to September 9, 1945, and in feasibility studies for the Nuclear Energy for the Propulsion of Aircraft project from May 1, 1946 through December 31, 1951. NIOSH found that it lacked access to internal and external personnel dosimetry data and other workplace monitoring data necessary to reconstruct internal and external exposures to uranium compounds and other radioactive materials that may have been present at the facility during the time period in question, and thus was unable to estimate with sufficient accuracy radiation doses from internal and external exposures for these workers. The Board concurs with this determination.**

2. **NIOSH determined that health was endangered for workers exposed to radiation at the S-50 Oak Ridge Thermal Diffusion Plant in the time period in question. The Board concurs with this determination.**

3. **The NIOSH review of the data found that it was sufficient to support accurate individual dose reconstruction for occupational medical doses for workers in the area of the S - 50 Oak Ridge Thermal Diffusion Plant. The Board concurs with this determination.**

Enclosed is supporting documentation from recent Advisory Board meetings held in Las Vegas, Nevada where the Special Exposure Cohort was discussed. If any of these items are not available at this time, they will follow shortly.

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Discussion Points:

- To add a sentence indicating medical dose is considered feasible (reflected in the above language).
- Clarification that health endangerment is governed by 83.13 and 83.14, both of which are cited in the NIOSH review.
- Exploration of NIOSH's assumptions concerning the medical case.

NOTE:Mr. Presley was asked to abstain from the vote on this petition due to a possible conflict of interest as a result of his connection with the Oak Ridge facilities.

The motion carried unanimously, with one abstention.

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SC&A TASKING
Site Profile Reviews

In preparation for selecting site profiles for SC&A review in FY 2007, the Board received additional information requested earlier in the meeting. Added to the list of site profiles completed and listed on the NIOSH web site was the total number of cases at each site and the number of cases with completed DRs. Sites with qualified petitions and those with site profiles under development were also listed. A free-form discussion followed to ascertain the Board's priorities.

Discussion Points:

- The status of the Clarksville/Medina site.
- The Chapman Valve exposure matrix will be thoroughly reviewed as part of the SEC review process.
- The large number of cases at Portsmouth.
- The number of cases at various other sites.
- Status of the Savannah River Site site profile review.

Board members individually selected their top five choices and indicated them by a show of hands. The following selected sites are shown with their respective number of votes. Without objection, it was agreed these choices represent Board action:

1.Lawrence Livermore National Laboratory (9 votes);
2.K-25 (8 votes);
3.Pantex (7 votes);

4.Portsmouth (6 votes);
5.Argonne West (5 votes);
6.Sandia Albuquerque (4 votes);
7.Atomics International (formerly ETEC) and
Clarksville/Medina (2 votes each).

SC&A will proceed immediately to review site profiles for Lawrence Livermore National Laboratory and K-25. They will inform the Board when ready to start the third review, in case Board priorities have shifted. Absent further action by the Board, SC&A will defer to this priority list.

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Procedures Reviews

Dr. Wade set the stage for selection of up to 30 procedures for SC&A review in 2007. Board members were provided **Dr. Mauro**'s partial list of procedures already reviewed under other task work, a candidate list to which OTIB-38 and OTIB-42 had been added, and SC&A's recommended list of 22 procedures to be reviewed.

Asked to comment on the preliminary list on behalf of NIOSH, **Mr. Hinnefeld** suggested using the later Performance Evaluation Report for Bethlehem Steel because the entire site profile had recently been revised, with incorporation of many changes including ingestion. He recommended SC&A review OTIB-6 due to its frequent citation in individual DR reviews. OTIB-9, however, is rarely or never used and he suggested there would be little utility in reviewing this early procedure. Review of any coworker approaches would be valuable. OTIB-55 and the OTIB on Y-12 criticality doses would be of interest. He suggested beginning the reviews of Procedures 59 and 86 to determine if they are indeed worth reviewing.

It was decided that a maximum of 15 assignments would be made, due to lack of the complete list of procedures reviewed and not reviewed. SC&A's list of 22 was reduced to 14 for various reasons including minimal use, site profile revisions underway, and some that were deemed more administrative than technical. Others were already scheduled to be reviewed as part of other current tasking.

Without objection, these choices constitute a consensus of the Board for the contractor to proceed on their procedures review task: OCAS-PER-004, OCAS-TIB-013, ORAU-OTIB-006, ORAU-OTIB-0013, ORAU-OTIB-0015, ORAU-OTIB-0039, ORAU-OTIB-0055, ORAU-OTIB-0057, ORAUT-PROC-0060, ORAUT-PROC-0094, ORAUT-PROC-0095, ORAUT-PROC-0097, OTIB-42, OTIB-38.

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NIOSH CONFLICT OF INTEREST POLICY

Dr. Lewis Wade, NIOSH
Board DFO

Dr. Wade provided context for the NIOSH statement of their conflict of interest policy, revised draft dated September 14 2006. The document was modified to reflect comment received from its last airing. It no longer applies to the Board or SC&A although, to preserve a record of certain information, the appendix deals with remedies if a Board member is found to be conflicted. **Dr. Wade** expressed the need to finalize the policy so that ORAU could proceed with its review of past work and the plan for attribution and annotation. He emphasized the Board's ability to change the document as needed.

Dr. Wade described four principal changes, as follows:

1. The definition of operator has been changed to be more realistic and precise.
2. The formerly open-ended term "business confidential" has been defined in relation to the type permitted to be withheld from disclosure within the Freedom of Information Act.
3. NIOSH has added a new section, 3.13, concerning workers with a relationship subordinate to someone conflicted. This modification helps prevent the COI policy from finding all such workers conflicted, thus paralyzing the ability to move forward.
4. This addresses the issue of key program function. Authoring a site profile dealing with a particular site would be a key program function. Authoring generic documents that cover complex-wide issues is not regarded as a key program function. This change leaves open the capability of the people working on them. Multiple site TIBs fall within a gray area that will need to be administered as the Board continues its work.

Dr. Wade invited individual Board members to comment to him early the following week, with the intention that this policy could be finalized by September 27.

Dr. Wade clarified the two steps for considering COI for the Board. One is a determination as to whether a conflict exists; the second is the issue of remedy, which is spelled out clearly in the appendix to the revised NIOSH COI document. The Board will be asked to consider how to determine if a conflict exists.

Board members were provided a document entitled "Ethics Rules for Advisory Committee Members and Other Individuals Appointed as Special Government Employees." **Dr. Wade** highlighted the aspects of financial interest and impartiality for SGEs, pointing out the Board could go beyond those considerations in developing its own procedures.

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Discussion Points:

- The current Appendix I deals only with Advisory Board practice in cases of conflict, not specifics of what constitutes a conflict.
- The Board's issues with corporate COI as expressed in their letter to **Dr. Howard** were incorporated into this policy.
- The Appendix 2 wording does not adequately capture corporate COI.
- A redline version of the COI policy would be helpful for Board members to compare changes made to the previous draft.
- A clarification of responsibilities of the document owner would be helpful.
- A reference, perhaps as a footnote, concerning single-site or multiple-site TIBs and how to handle related COI issues was suggested for this gray area.
- How a site-specific document might appear to be generic, and how to avoid the appearance of conflict when conflict in fact does not exist.

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Dr. Ziemer reminded the Board of its opportunity to consider whether or not to develop a separate COI policy for itself, bearing in mind the Board is bound to other documents, including the Federal Ethics Rules. **Dr. Melius** suggested the need for expert guidance in developing the policy in order to avoid potential conflict with other sets of rules governing FACA members and SGEs. **Dr. Ziemer** expressed his desire for separate conflict parameters for Board members because, under the new NIOSH policy, he would likely be found conflicted on every DOE site and current Board members might all have to resign.

Noting the official workgroup looking at conflict of interest is an ad hoc group, **Dr. Ziemer** suggested the Board might want to think in terms of a workgroup to work with legal counsel and others in developing a framework that would outline the needed parameters.

It was discussed that both actual and perceived Board conflicts of interest need to be considered in developing their policy. Transparency demands clarity on these points. The ethics rules regarding impartiality are fairly clear on what constitutes conflict;

however, ambiguity surrounds the issue of impartiality as it pertains to Board members' conflicts.

Ms. Emily Howell from the Office of General Counsel cited the precedent of the Advisory Committee on Immunization Practices (ACIP), another advisory board within CDC, which has written its own COI policy. The program is very concerned with transparency and ABRWH is being asked for its voice on how to go beyond the FACA and other rules in addressing its own specific conflict of interest concerns. Any board COI policy must go through several layers within the General Counsel's office for approval.

The Board reached consensus on developing its own policy. A conflict of interest workgroup was formed, to be chaired by **Dr. Lockey**, with **Dr. Melius**, **Mr. Presley** and **Dr. Ziemer** as members. The workgroup was charged to create an initial draft Board COI policy using existing government documents, the template of the ACIP policy, and assistance from counsel. **Dr. Wade** agreed to provide a redline version of the NIOSH policy to the workgroup within the next few days containing words to deal with the issue of single/multiple site.

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APPROVAL OF MINUTES

A motion was made and seconded to approve as distributed the minutes of the 37th meeting of the Advisory Board on Radiation and Worker Health held in Denver, Colorado April 25 through 27, 2006.

With no discussion, the motion passed unanimously.

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A motion was made and seconded to approve as distributed the minutes of the 11th meeting of the Subcommittee for Dose Reconstruction and Site Profile Reviews held in Washington, D.C. on June 14, 2006.

With no discussion, the motion passed unanimously.

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A motion was made and seconded to approve as distributed the minutes of the 38th meeting of the Advisory Board on Radiation and Worker Health held in Washington, D.C. June 14 through 16, 2006.

With no discussion, the motion passed unanimously.

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WORKING GROUPS, MEMBERSHIP AND STRUCTURE

Dr. Ziemer addressed some apparent confusion regarding working groups addressing SEC issues. He explained there is a one-time workgroup formed to look into SEC petitions that have not been qualified for evaluation by NIOSH. **Dr. Lockey** had earlier volunteered to chair that group, but a replacement is now needed for Dr. DeHart. There is an ongoing workgroup focusing on SEC activities chaired by **Dr. Melius**.

Ms. Munn volunteered to fill the vacancy created by Dr. DeHart's retirement. Other members of the one-time workgroup include **Dr. Roessler** and **Dr. Melius**. **Mr. Clawson** was added to the group as a worker representative. **Mr. Elliott** invited the workgroup to schedule their meeting in Cincinnati at the NIOSH offices where he offered to provide all the documentation in its entirety, a briefing on the NIOSH processes to date, and a report from the NIOSH assessment team. **Dr. Lockey** was charged with arranging a meeting time.

Dr. Wade reviewed membership of the Board's workgroups. He reminded the Board that the procedures review, formerly handled by the subcommittee, will need a tracking method. **Dr. Ziemer** added that a new workgroup will be needed to work on SC&A's review of the new set of procedures.

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BOARD/WORKING GROUPS' FUTURE PLANS
Discussion of Overarching Issues

Dr. Ziemer defined overarching issues as those which span multiple working groups and affect multiple sites. The issue is how to track them and keep them active. **Dr. Wade** expressed concerns about how to keep an issue alive when working groups pass an issue to another entity. Discussion brought forth ideas for solutions and a continued clarification of the issue.

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Discussion Points:

- Compilation of all issues into a mega-matrix.

- Formation of a working group with oversight of overarching issues. This was objected to as overly time-consuming.
- Formation of an individual workgroup for each overarching issue.
- Establishment of a master deficiencies list reflecting the number of sites involved, to be presented to the Board on a routine basis, with NIOSH to remove items that are closed out.
- A refocusing on the problem as one not only of physical tracking, but also of technical solutions.
- The General Account Office had recommended the Board institute a tracking mechanism for issues arising not only from the workgroups but also from Board interactions.
- SC&A and NIOSH are both well-positioned to track issues arising in both workgroup and Board meetings.
- The clerical tracking issue must be resolved before the technical aspect can be addressed.
- An individual could be named as point person for all issues.
- A suggestion NIOSH come forward with a position paper preparatory to incorporating any resolved issues into TIBs or TBDs; NIOSH would then track the comment resolution both in the matrix for that given position paper and in other working group efforts.
- NIOSH tracking would be advantageous in that they are the continuing agency to follow this program long after the need has ceased for a subcontractor and working groups.
- The tracking issue exists not only for overarching issues but also for site-specific unresolved processes that are closed out with actions stating that someone will do something, when the ultimate resolution is not tracked.
- Tracking is required for issues that are unresolved and issues marked for follow-up.
- Focus will need to be kept on Board issues, not just those arising within the work of NIOSH and SC&A.
- Because working groups are more familiar with details of specific issues, they should hear from NIOSH and SC&A, but then ultimately make their own recommendations to the Board concerning overarching issues.
- The starting point for identification of overarching issues might begin with complex-wide issues identified in **Mr. Presley**'s working group, with the intent of agreeing on what issues should come into the category.
- Caution that rather than attempting to solve overarching issues, the first step should entail developing a system of documenting them, perhaps calling upon NIOSH, SC&A and the workgroups to prepare lists to be discussed on a conference call or at the December Board meeting.

Dr. Wade suggested **Mr. Elliott** could provide an update on the status of cross-cutting issues as part of his presentation at every Board meeting. The purpose of **Mr. Elliott**'s proposed position paper would be to avoid the creation of more and more new documents by instead addressing existing documents and modifying them.

It was agreed the list of cross-cutting issues from **Mr. Presley**'s working group would serve as a starting list, with more issues to be added.

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Dr. Wade reminded the Board of its upcoming schedule, which includes a teleconference on October 18 and a Board meeting December 11 through 13, 2006. Scheduled in 2007 is a Board meeting February 7 through 9; a teleconference in mid-March; a Board meeting in late April; a teleconference in mid-June; and a Board meeting in August.

Possible meeting locations discussed included Denver (for Rocky Flats), New Mexico (for LANL), and the Cincinnati area (for Fernald).

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Senator Harry Reid of Nevada addressed the Board via video conference, expressing support for inclusion in the SEC of NTS workers who contracted cancer from work during the above-ground nuclear tests, even though they worked on the site less than 250 days. His statement in its entirety may be found at www.cdc.gov/niosh/ocas.

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BOARD CORRESPONDENCE/WORKING TIME

Several items referenced in Mr. Peter Stafford's June 23 letter to the Board have been addressed since its arrival. The TIB on construction trades workers has been issued. **Mr. Elliott** clarified that he has been in consistent dialogue with **Mr. Stafford** since the Denver Board meeting and has provided, at three points since that meeting, the status of the construction worker TIB and the number of CTW claims NIOSH has completed.

Dr. Knut Ringen formed a working group to look at the TIB and offer comments to NIOSH. This same panel of experts contributed to the early stages of TIB-52. They sent a letter, which **Mr. Elliott** offered to copy to Board members as soon as he returns to his office.

Four requests from Mr. Stafford's June letter need Board response. They are:

1. To consider establishing a subcommittee to review the TIB.
2. That SC&A strengthen its expertise in construction worker exposure estimation.
3. That the Board agree with and suggest that OCAS do certain things.
4. That QA procedures on the DRs track the construction trades worker cases and determine the distribution among them of cancers and other variables.

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Dr. Ziemer observed that fulfilling request number two would require new tasking, and possible addition of a consultant to the SC&A staff. As to request number four, broad identification of CTW cases can be accomplished after DRs are completed, but not when DR cases are chosen. Job description cannot be used as a sorting mechanism in selecting cases to be dose reconstructed, but after the DRs are completed, some cases can be identified as those of construction trades workers.

Discussion Points:

- Request number two asks for the selection of a random sample of construction worker DRs for audit.
- Requests should be answered positively.
- The Board has charged SC&A with reviewing TIB-52, which addresses most of these issues.
- A substantial number of CTW dose reconstructions are in fact under review.
- A positive response to request number one includes acknowledgment that the review of the TIB has been tasked, and the Board has signaled its intent to form a procedures review working group.
- Addressing request number three, the Board was not chartered to undertake such issues as malfeasance, bias and unbalanced policies.
- The pitfalls of establishing a separate category of employee type, such as CTW.
- The unbalanced policies in question refer to the fact that many of the CTWs worked for subcontractors rather than primary contractors, resulting in different policies for monitoring and radiation protection.
- Normal procedures address such inequities where appropriate.

Dr. Ziemer observed the suggestions were sensitive to the needs of the CTW group while recognizing the limitations of the Board, SC&A and

NIOSH. Mr. Stafford's and Dr. Ringen's concerns have been largely addressed through the new TIB and plentiful communications with NIOSH. **Dr. Ziemer** added it seemed the Board's efforts were recognized.

Offering to prepare a letter of response to Mr. Stafford, which he will distribute to everyone for editorial rather than conceptual changes, **Dr. Ziemer** outlined his approach. He will indicate that review of the TIB will begin; it will be explained that the Board is developing its COI policy; QA procedures are already in place; and the Board can take a look, after the fact, at variables concerning CTWs as a matter of record.

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The Board then discussed problematic correspondence from DOL which has caused recent complaint by members of the public. **Mr. Elliott** wanted the record to show that he follows up immediately on any such problems at NIOSH and corrects them. He talks with DOL if the issue relates to their correspondence with the public.

Many suggestions were made for how best to define the problem, and how to solve it. Serious consideration was given to how to inform and follow up with DOL to ensure correction. It was noted that the general public may not distinguish between DOL and NIOSH, both being viewed simply as the government. Therefore, any such problems discredit all entities within the government.

It was decided that the Board's communication with **Mr. Peter Turcic** at DOL on this matter would be formalized in a letter, with specific information upon which he could act. The idea of asking DOL to share information on their QA and monitoring programs was considered; however, it was pointed out that correct QA might nevertheless authorize sending a poorly-written letter.

In contemplating various actions, the Board was cautioned to consider its charter and its responsibilities to oversee the scientific quality of the dose reconstruction program. The Board was urged to be absolutely certain of the facts. Although an offensive form letter from DOL to a claimant surfaced again a year after a complaint was lodged, it was unclear as to when that second letter was written and whether its reappearance represented an ongoing, unaddressed problem. It was noted that, apart from the problematic letter, continuing problems with DOL communications should form the basis of the letter to **Mr. Turcic**.

Mr. Elliott, observing that neither NIOSH nor DOL were completely blameless, indicated that following one of the Board meetings where

public comment had addressed this issue, he had requested ORAU review the public comment portion of Board meetings and list each reference to such complaints. That information is available. **Dr. Ziemer** took it by consent that the Board would review that information and decide on a specific course of action in the next Board teleconference. **Mr. Elliott** committed to provide the material by October 2.

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With no further business to come before the Board, the meeting was adjourned at 3:50 p.m.

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End of Summary Minutes

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I hereby confirm that these Summary Minutes are accurate, to the best of my knowledge.

Paul L. Ziemer, Ph.D., Chair

Date